

Maximum Score from Performing Multiplication Operations [\(View\)](#)

You are given two integer arrays `nums` and `multipliers` of size `n` and `m` respectively, where $n \geq m$. The arrays are **1-indexed**.

You begin with a score of `0`. You want to perform **exactly** `m` operations. On the `ith` operation (**1-indexed**), you will:

- Choose one integer `x` from **either the start or the end** of the array `nums`.
- Add `multipliers[i] * x` to your score.
- Remove `x` from the array `nums`.

Return the **maximum** score after performing `m` operations.

Example 1:

Input: `nums = [1,2,3]`, `multipliers = [3,2,1]`

Output: 14

Explanation: An optimal solution is as follows:

- Choose from the end, `[1,2,3]`, adding $3 * 3 = 9$ to the score.
- Choose from the end, `[1,2]`, adding $2 * 2 = 4$ to the score.
- Choose from the end, `[1]`, adding $1 * 1 = 1$ to the score.

The total score is $9 + 4 + 1 = 14$.

Example 2:

Input: `nums = [-5,-3,-3,-2,7,1]`, `multipliers = [-10,-5,3,4,6]`

Output: 102

Explanation: An optimal solution is as follows:

- Choose from the start, `[-5,-3,-3,-2,7,1]`, adding $-5 * -10 = 50$ to the score.
- Choose from the start, `[-3,-3,-2,7,1]`, adding $-3 * -5 = 15$ to the score.
- Choose from the start, `[-3,-2,7,1]`, adding $-3 * 3 = -9$ to the score.
- Choose from the end, `[-2,7,1]`, adding $1 * 4 = 4$ to the score.
- Choose from the end, `[-2,7]`, adding $7 * 6 = 42$ to the score.

The total score is $50 + 15 - 9 + 4 + 42 = 102$.

Constraints:

- `n == nums.length`
- `m == multipliers.length`
- `1 <= m <= 103`
- `m <= n <= 105`
- `-1000 <= nums[i], multipliers[i] <= 1000`